

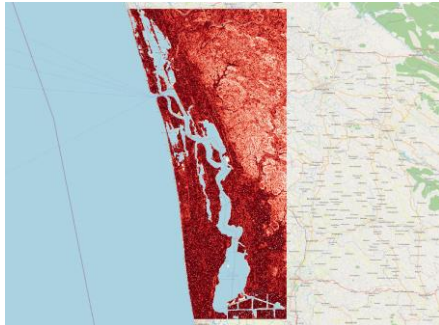
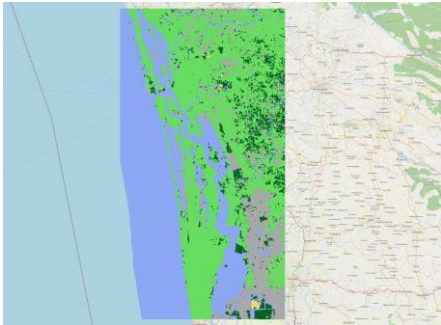
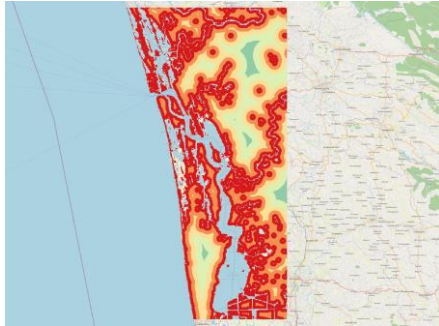
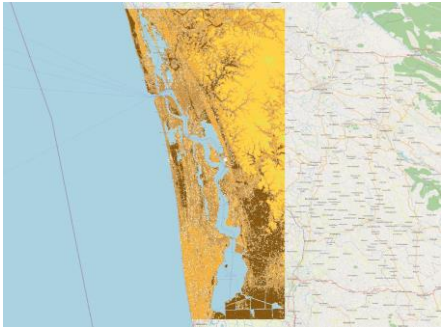


Use of TOSCA for development of flood module for Kochi

Kochi – Messina City Pairing

The Toolkit for Open Sustainable City Planning and Analysis (TOSCA) developed by HafenCity University Hamburg is a web-based, open-source Geographical Information System toolkit which helps translate large amounts of data into easily understandable spatial representation. This derives into an evidence-based consensus process for a diverse range of stakeholders from planners and regulators, to decision makers and citizens in general

As part of the IURC Kochi/India – Messina/Italy city pairing, a minimal viable use-case on flooding was developed in TOSCA by the Digital City Science team at HafenCity University in cooperation with Cochin University of Science and Technology and University of Messina



1

The results of the cooperation led to the development of a flood-risk map for Kochi.

2

Flood risk was predicted by utilizing various features like elevation, slope, land use land cover, distance from water bodies, etc

3

The flood risk map shows on a scale from 0-20 the areas of Kochi that are prone to flooding. Large part of the city close to the coast is subject to high risk of flooding.

4

This information is useful for policy makers and urban planners to better understand areas that require more attention in terms of mitigation & adaptation measures. The map can also be used to identify appropriate locations for the installation of surface water level sensors as early warning systems

